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Controlling Phony Disease of Peaches

Leaflet No. 515

U.S. DEPARTMENT OF AGRICULTURE

Controlling Phony Disease of Peaches

Phony disease is a highly destructive disease of peach trees. It is known to have occurred at one time in 17 peach-growing States, and now causes damage of economic importance in 8 of them. The economically affected States are Alabama, Arkansas, Georgia, Louisiana, Mississippi, Missouri, South Carolina, and Texas.

DAMAGE

Phony disease dwarfs the new twig growth of infected peach trees. It reduces the size of the fruit and total yield of the trees. A peach tree may entirely cease to bear commercial crops after it has been visibly infected with this disease for 2 years.

The virus of phony disease does not kill peach trees, but it destroys their productive capacity and commercial value. There is no known cure for an infected tree. As soon as infection is evident, the tree should be destroyed to prevent it from serving as a source of infection for spread to healthy trees. It is not profitable to cultivate, fertilize, prune, and spray a diseased tree.

SYMPTOMS

Peach trees infected with the virus of phony disease show a marked dwarfing of new terminal-twig growth. The terminal twigs have profuse lateral branching near their tips. Spaces between the leaves and between the branches become much shorter. Diseased trees bloom and leaf out earlier than normal trees in spring and hold their foliage longer in fall. Leaf color changes from a normal light green to a much darker green. Diseased trees appear more rounded in shape than healthy trees. Symptom expression is most striking when the trees are in full foliage and in good vigor.

Peach trees may not show symptoms of phony disease until 15 months after they have become infected. Virus from infected trees may be spread to healthy trees even though the infected trees do not appear to be diseased.

HOW THE DISEASE SPREADS

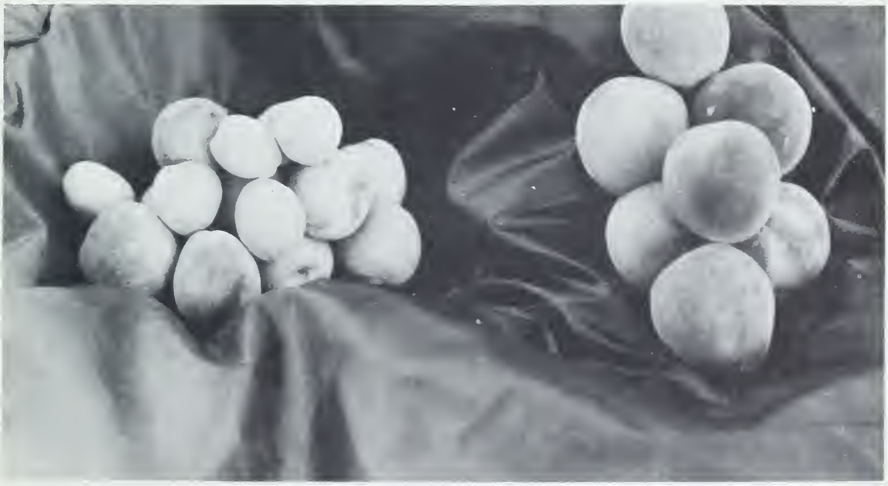
The virus of phony disease is spread by leafhoppers, commonly called sharpshooters. The two principal species responsible for transmission of the virus have the scientific names *Homalodisca coagulata* and *Oncometopia orbona.* These insects feed on peach trees mostly during spring and fall, but attack weak or injured trees any time during the growing season. They are strongly attracted to twigs on dehorned trees.

Sharpshooters breed chiefly on stout-stemmed weeds such as lambsquarters, ragweed, and coffeeweed, and on crop plants such as cotton, okra, corn, and sunflowers.

Susceptibility to phony disease is limited to trees of the genus *Prunus*, which includes peach, plum, apricot, and almond. All varieties of peach trees are susceptible. The disease is found so generally in wild plums that destruction of these trees near orchard sites is an important part of a control program.

CONTROL

To be effective, control must be practiced both in the orchard and in areas adjacent to the orchard.



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Left, **peaches from a tree infected with the virus of phony disease;** ***right,*** **peaches from a normal tree.**

Control in the Orchard

Control in the orchard can be accomplished by (1) prompt removal of all trees that are visibly infected with phony disease virus, and (2) destroying wild-plum growth in or adjacent to orchards. If a peach tree is infected, it is futile to try to save it. Wild plum is an excellent host for the virus, and should be destroyed whether or not it is infected.

An annual survey of an orchard should be made to detect diseased peach trees and the presence of wild plum. The survey should begin soon after the fruit is harvested.

Plant only peach trees that are certified disease-free by the nursery supplying them.

Control in Adjacent Areas

One year before planting a new orchard, destroy all wild-plum trees and peach trees within 300 yards of the new site. This will remove nearby sources of infection.

The best way to destroy wild plum is with herbicide. During the early spring months (April, May, and June), Ammate (ammonium sulfamate) is very effective when used as a coarse spray on the foliage of plum trees. Another very effective way is to apply a basal spray of the weedkiller 2,4,5-T, mixed with fuel oil or kerosene. This spray is applied during winter months when the plum trees are dormant. It is necessary to spray only the lower part of the trunks, from the ground to a height of about 18 inches.

A high percentage, often all, of the plum trees will be killed by either of these methods. In some instances, the larger trees will sprout the following year, making reinspection and touchup treatments necessary.

CAUTION

Ammate and 2,4,5-T are herbicides. Do not allow their spray to drift to susceptible plants. These products may injure cotton, beans, peas, grapes, ornamentals, and other plants. Coarse sprays are less likely to drift than fine sprays.

Thoroughly clean your spray equipment with a suitable chemical cleaner before using it for other purposes—or do not use the same spray equipment for other purposes. Do not store herbicides near fertilizers, seeds, insecticides, or fungicides. Follow carefully the precautions printed on container labels.

This publication supersedes Program Aid 225, "How to Reduce Losses From Phony Disease of Peaches."

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